

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF OHIO  
WESTERN DIVISION AT TOLEDO**

NEO WIRELESS, LLC,

*Plaintiff,*

V.

FCA US, LLC,

*Defendant.*

[illegible]

Civil Action No. 3:22-cv-01252

## JURY TRIAL DEMANDED

**PLAINTIFF NEO WIRELESS LLC'S**  
**COMPLAINT FOR PATENT INFRINGEMENT**

Neo Wireless LLC (“Neo Wireless,” “Neo,” or “Plaintiff”) brings this action for patent infringement under 35 U.S.C. § 271 against Defendant FCA USA, LLC (“FCA” or “Defendant”). Plaintiff alleges, based upon its own personal knowledge with respect to its own actions and based upon information and belief with respect to all others’ actions, as follows:

## THE PARTIES

1. Plaintiff Neo Wireless LLC is a Delaware corporation with its principal place of business located in Wayne, Pennsylvania.
2. On information and belief, Defendant FCA US, LLC is a business entity organized and existing under the laws of the state of Delaware, with its principal place of business at 1000 Chrysler Dr., Auburn Hills, Michigan, 48326. FCA may be served through its registered agent,

3. The Corporation Trust Company, Corporation Trust Center, 1209 Orange St., Wilmington, Delaware 19801.

**JURISDICTION AND VENUE**

4. This action arises under the Patent Act, 35 U.S.C. § 1 *et seq.*

5. Subject matter jurisdiction is proper in this Court under 28 U.S.C. §§ 1331 and 1338(a).

6. Venue in this District is proper under 28 U.S.C. § 1391 and 28 U.S.C. § 1400(b) against FCA because, on information and belief, FCA (1) has committed acts of infringement in this District and (2) has a regular and established place of business in this District.

7. This Court has personal jurisdiction over FCA. FCA has continuous and systematic business contacts with the State of Ohio. Specifically, FCA conducts business, has committed acts of patent infringement, and has induced acts of patent infringement by others in this District, the State of Ohio, and elsewhere in the United States.

8. FCA, directly and through subsidiaries or intermediaries, has committed and continues to commit acts of infringement in this District by, among other things, designing, developing, manufacturing, importing, offering to sell, and selling products that infringe the Asserted Patents.

9. FCA does and intends to do business in Ohio and in this District, directly or through intermediaries, and offers its products and/or services, including those accused herein of infringement, to customers and potential customers located in Ohio and in this District.

10. FCA, both directly and through its subsidiaries or intermediaries (including distributors, retailers, and others), has purposefully and voluntarily placed one or more infringing products and/or services, as described below, into the stream of commerce with the expectation

that those products will be purchased and used by customers and/or consumers in the Northern District of Ohio.

11. FCA maintains facilities throughout the State of Ohio, including at least the FCA US Toledo Assembly Complex at 4000 Stickney Ave, Toledo, Ohio 43608.

12. The Toledo Assembly Complex is made up of 3.64 million square feet of floor space over 312 acres of land.<sup>1</sup> The Toledo Assembly Complex employs approximately 6,290 people and is made up of two plants: the Toledo Supplier Park and Toledo North.<sup>2</sup>

13. FCA has been and continues to make, use, sell, offer for sale, assemble, purchase, and import infringing products and/or services within the Northern District of Ohio.

14. FCA has placed the Accused Products into the stream of commerce by selling and/or offering to sell the Accused Products in the Northern District of Ohio, shipping Accused Products into the Northern District of Ohio, and/or shipping Accused Products knowing that those products would be shipped into the Northern District of Ohio.

### **THE ASSERTED PATENTS**

#### **I. The '366 Patent**

15. On June 18, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,467,366 (“the ’366 patent”), entitled “Methods and Apparatus for Random Access in Multi-Carrier Communication Systems.” A copy of the ’366 patent is attached as Exhibit 1.

16. The ’366 patent issued from U.S. Patent Application 13/205,579, which was filed by Neocific Inc. on August 8, 2011 on behalf of the inventors. The now-issued ’366 patent was

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<sup>1</sup> See <https://media.stellantisnorthamerica.com/newsrelease.do?id=339>.

<sup>2</sup> See *id.*

assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

17. The '366 patent is valid and enforceable.

**II. The '908 Patent**

18. On November 11, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,833,908 (“the '908 patent”), entitled “Channel Probing Signal for a Broadband Communication System.” A copy of the '908 patent is attached as Exhibit 2.

19. The '908 patent issued from U.S. Patent Application 16/902,740, which was filed on June 16, 2020 by Neo Wireless LLC on behalf of the inventors.

20. The '908 patent is valid and enforceable.

**III. The '941 Patent**

21. On September 11, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,075,941 (“the '941 patent”), entitled “Methods and Apparatus for Multi-Carrier Communications With Adaptive Transmission and Feedback.” A copy of the '941 patent is attached as Exhibit 3.

22. The '941 patent issued from U.S. Patent Application 15/082,878, which filed by Neocific, Inc. on March 28, 2016. The now-issued '941 patent was assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

23. The '941 patent is valid and enforceable.

**IV. The '450 Patent**

24. On October 15, 2019, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,447,450 (“the '450 patent”), entitled “Method and System for

Multi-Carrier Packet Communication with Reduced Overhead.” A copy of the ’450 patent is attached as Exhibit 4.

25. The ’450 patent issued from U.S. Patent Application 15/676,421, which was filed by Neocific, Inc. on August 14, 2017. The now-issued ’450 patent was later assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

26. The ’450 patent is valid and enforceable.

**V. The ’512 Patent**

27. On March 30, 2021, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,965,512 (“the ’512 patent”), entitled “Method and Apparatus Using Cell-Specific and Common Pilot Subcarriers in multi-Carrier, Multi Cell Wireless Communication Networks.” A copy of the ’512 patent is attached as Exhibit 5.

28. The ’512 patent issued from U.S. Patent Application 17/012,813, which was filed by Neo Wireless on September 4, 2020.

29. The ’512 patent is valid and enforceable.

**VI. The ’302 Patent**

30. On September 8, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,771,302 (“the ’302 patent”), entitled “Channel Probing Signal for a Broadband Communication System.” A copy of the ’302 patent is attached as Exhibit 6.

31. The ’302 patent issued from U.S. Patent Application 15/953,950, which was filed on April 16, 2018 and was assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

32. The ’302 patent is valid and enforceable.

33. Neo Wireless owns all rights, title, and interest in and to each of the '366, '908, '941, '450, '512, and '302 patents (the "Asserted Patents") and possesses all rights of recovery.

### **FACTUAL ALLEGATIONS**

34. Inventor Xiaodong (Alex) Li, Ph.D. founded Neocific Inc. in the early 2000s to design, develop, and implement a new wireless communication system. He and his co-inventors had extensive experience with wireless communications systems, including the development of the Wi-Max standards, and a deep understanding of the flaws in existing systems at the time. The inventors saw an opportunity to create a new wireless communication system meant to address those flaws while incorporating cutting-edge Orthogonal Frequency-Division Multiple Access (OFDMA) based technologies, and, starting in the 2004-2005 timeframe, they filed patents on the work.

35. Dr. Li served as the President and Founder of Neocific. Dr. Li obtained his Ph.D. in electrical engineering from the University of Washington, his M.S. from Shanghai Jiao Tong University, and his B.S. from Tsinghua University. Dr. Li has authored more than 30 journal and conference papers in wireless communications, video coding, and networking. He has been granted more than 100 U.S. and foreign patents.

36. Dr. Titus Lo, Ph.D. is a founding employee of Neocific. Dr. Lo obtained his Ph.D. in electrical engineering from McMaster University and his B.S. from the University of British Columbia. Dr. Lo has authored more than 30 technical papers in international peer-reviewed journals and presented more than 50 times at industry events. He has been granted more than 100 U.S. and foreign patents.

37. The inventions in the Asserted Patents relate to various improvements in OFDMA networks and corresponding user equipment, and those improvements have since been incorporated into the 3GPP standards for 4G/LTE and 5G/NR networks.

38. Neo Wireless owns all substantial right, title, and interest in the Asserted Patents, and holds the right to sue and recover damages for infringement thereof.

39. David Loo is the CEO of Plaintiff Neo Wireless. Mr. Loo works and resides in Wayne, Pennsylvania. Mr. Loo has over a decade of experience as a licensing executive and patent attorney with a well-established track record of assisting companies, inventors and patent holders to ensure they are fairly compensated for their inventions.

40. The wireless communication industry has been developing rapidly since Bell Labs developed the First Generation of modern commercial cellular technology in 1984. Multiple wireless communication technologies designated by generations emerged and brought new capacities to people all over the world. In 2008, 3GPP created and finalized the LTE standards as an upgrade to 3G. The cellular industry recognized its major benefits, and virtually all cellular device manufacturers have embraced LTE as the next generation of commercial cellular technology and developed phones, hotspots, and other cellular-connectivity devices to utilize the 4G LTE technology.

41. In recent years, automakers have implemented this cellular communications technology into their vehicles. For example, telematics systems first debuted in 1996 through OnStar using analog cell networks, which allowed consumers to receive remote diagnostics, remotely unlock vehicles, and receive emergency services including aid after a collision. In 2007, 3G technology emerged bringing greater speed and capacity to these features, allowing automakers to design more advanced functions.

42. When the technology emerged, FCA began implementing the newest 4G LTE cellular technology into many of its products. 4G LTE technology provided for 10 times faster data speeds, increased responsiveness, and the ability to support voice and data connections simultaneously. 4G LTE connection further provided consumers with a variety of in-vehicle Wi-Fi hotspots and vast entertainment options. As a result, FCA could better support a variety of wireless features including increased in-vehicle application responsiveness, faster network speeds and connected services, voice recognition, steering wheel controls, remote start, remote door lock, vehicle health reports, stolen vehicle location assistance, Wi-Fi hotspot, etc.

43. FCA provides 4G LTE connectivity in its various products via the Uconnect, SiriusXM Guardian, Jeep Connect, RAM Connect, and Wagoneer Connect systems integrated into the Accused Products.<sup>3</sup>

44. Building on these 4G LTE capabilities, FCA developed and currently utilizes the Uconnect App that enables its customers to interact with their vehicles from their cellular devices, using the cellular connectivity of the vehicles. Features on the Uconnect app include remote start, unlocking and locking the vehicle, flashing the lights and sounding the horn, and finding the vehicle's location via Vehicle Finder.

45. FCA implements 4G/LTE communications in certain car models—including but not limited to the Jeep Cherokee, Compass, Wagoneer, Gladiator, Renegade, Wrangler models, and the RAM 1500, 2500, 3500, Chassis Cab, and Promaster models—as well as those that may in the future implement 4G/LTE or 5G/NR capabilities. These models are collectively referred to herein as the “Accused Products.”

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<sup>3</sup> See <https://www.driveuconnect.com/>.



46. FCA's Accused Products are configured to operate within 4G/LTE and/or 5G/NR cellular networks and in communication with base stations and other network access points. The cellular networks and base stations are interoperable and implement the one or more releases of the 4G/LTE and 5G/NR standards from release 8 through at least release 17. The cellular networks, including the cell-serving base stations, are controlled and configured by various carriers and implemented using a variety of hardware and/or software. Additionally, each base station may operate differently based on the wireless conditions, location, and/or network configuration.

47. Additionally, the communications between FCA's Accused Products and the serving base station include a multitude of signals back and forth in normal operation, such as when establishing connections, sending and receiving control information, sending and receiving reference signaling, communicating data in the uplink and downlink, obtaining networks parameters, etc. And FCA's Accused Products do this across a potentially large range of time and locations, including across a variety of base station equipment and configurations and/or wireless conditions. As such, FCA's Accused Products are configured to operate across the various modes, formats, and schemes defined in the 4G/LTE and 5G/NR 3GPP standards.

48. As described further below and set forth in Exhibits 7–12, the Asserted Patents read onto portions of the 4G/LTE or 5G/NR standards, each of which FCA implements in its Accused Products. In particular, FCA and/or its customers and end users must practice one or more claims from each of the Asserted Patents in order to implement the 4G/LTE and/or 5G/NR standards in the Accused Products. Thus, on information and belief, FCA's implementation(s) of the 4G/LTE and/or 5G/NR standards necessarily infringes one or more claims of the Asserted Patents.

49. FCA does not have any rights to the Asserted Patents.

50. Neo Wireless has complied with 35 U.S.C. § 287. Neo Wireless does not make, offer for sale, or sell within the United States any patented article under the Asserted Patents. Additionally, to the extent it was necessary, Neo Wireless provided FCA with actual notice of its infringement prior to the filing of this lawsuit, or at a minimum by the filing of this Complaint.

51. In the interest of providing detailed averments of infringement, Neo Wireless has identified below at least one claim per patent to demonstrate infringement. However, the selection of claims should not be considered limiting, and additional claims of the Asserted Patents (including method, system, and apparatus claims) that are infringed by FCA will be disclosed in compliance with the Court's rules related to infringement contentions.

#### **FCA'S ACTS OF PATENT INFRINGEMENT**

52. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

53. As set forth below, FCA's Accused Products incorporate, without any license from Neo Wireless, 4G/LTE and/or 5G/NR technology protected by patents owned by Neo Wireless. Neo Wireless respectfully seeks relief from this Court for FCA's infringement.

54. FCA has directly infringed, and continues to directly infringe, the Asserted Patents under 35 U.S.C. § 271(a) by making, using, selling and/or offering to sell, in this District and elsewhere in the United States, and/or importing into this District and elsewhere in the United States, one or more of FCA's Accused Products, that is, certain infringing vehicles outfitted with instrumentalities that infringe the Asserted Patents, as further described in detail in Counts I–VI *infra*.

55. FCA directly or by controlling the activities of its subsidiaries, makes, sells, offers for sale, uses, and imports the Accused Products in the United States. And, FCA engages in the

assembly, designing, developing, testing, and manufacturing of the Accused Products sold, used, and offered for sale in the United States, as well as the selling of the Accused Products.

56. FCA makes, sells, offers for sale, uses, and imports the Accused Products in the United States. For example, FCA owns and operates at least four manufacturing facilities in the United States responsible for designing, building, assembling, manufacturing, offering for sale, and selling the Accused Products sold throughout the United States.<sup>4</sup>

57. FCA has indirectly infringed the Asserted Patents under 35 U.S.C. § 271(b) by actively inducing infringement by others, such as its subsidiaries, dealerships, distributors, retailers, and end-user customers, by, for example, implementing the infringing features in its cellular-capable products, encouraging its users to take advantage of 4G/LTE and/or 5G/NR features within the United States, and/or instructing, dictating, or training its dealerships and customers to use the infringing features. Because it performed these acts with full knowledge of the Asserted Patents and its infringement thereof, as set forth in detail below, FCA has specifically intended others, such as its subsidiaries, dealerships, retailers, and end-user customers, to infringe Neo's Asserted Patents knowing the acts of its subsidiaries, dealerships, retailers, and end-user customers constitute infringement.

58. For example, FCA's advertising, sales, design, development and/or technical materials related to the 3GPP 4G/LTE and/or 5G/NR standards associated with the Accused Products contained and continue to contain instructions, directions, suggestions, and/or invitations that invite, entice, lead on, influence, encourage, prevail on, move by persuasion, and/or cause its subsidiaries, distributors, retailers, dealerships, customers, and the public to directly infringe at least one claim of each of the Asserted Patents, either literally or under the doctrine of equivalents.

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<sup>4</sup> See <https://media.stellantisnorthamerica.com/factsheets.do?mid=>.

59. FCA has further provided the above-mentioned technical documentation and training materials to its subsidiaries, distributors, retailers, dealerships, customers, and the public that cause end users of the Accused Products to utilize the products in a manner that directly infringe on one or more claims of the Asserted Patents. FCA has engaged in such inducement to promote the sales of the Accused Products (i.e., through user manuals, product support, marketing materials, technical materials, and training materials) to actively induce the end users of the Accused Products to infringe the Asserted Patents.

60. FCA, through its subsidiary websites, advertises to its customers and other end users the Uconnect, SiriusXM Guardian, Jeep Connect, RAM Connect, and Wagoneer Connect systems as a means to entice sales and use of the Accused Products.<sup>5</sup> These advertisements, among others, further describe to a customer or end user how to use the infringing instrumentalities of the Accused Products.

61. FCA further advertises and provides its customers and end users with specifications describing the infringing instrumentalities and how they are used in the Accused Products.

62. FCA took the above actions intending to cause infringing acts by others.

63. Further, FCA has made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of FCA's Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the Asserted Patents at all times relevant to this suit. Alternatively, FCA subjectively believed there was a high

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<sup>5</sup> See, e.g., <https://www.chrysler.com/uconnect.html>;  
<https://www.chrysler.com/connectivity.html>; <https://www.jeep.com/connectivity.html>;  
<https://www.jeep.com/wagoneer/wagoneer-connect.html>;  
<https://www.ramtrucks.com/connectivity.html>.

probability that others would infringe the Asserted Patents but took deliberate steps to avoid confirming that it was actively inducing infringement by others.

64. Neo sent a letter to FCA on December 14, 2021 that FCA received no later than December 16, 2021 informing FCA of Neo Wireless's relevant patent portfolio, including listing the Asserted Patents and how the Asserted Patents cover certain 3GPP wireless standards used in FCA's Accused Products in an attempt to initiate commercial licensing discussions. FCA did not respond and continued infringing the Asserted Patents despite being given actual notice of the Asserted Patents and its infringement through Neo's letter as early as December 16, 2021. In any event, FCA was on actual notice and had actual knowledge of the Asserted Patents and its infringement on the date of service of this Complaint. Therefore, FCA was or is now aware of the Asserted Patents or has willfully blinded itself as to the existence of the Asserted Patents and the Accused Products' infringement thereof and has deliberately and wantonly continued to infringe on Neo's patent rights.

65. For the reasons described above, FCA's infringement of the Asserted Patents has been willful and egregious.

66. FCA's acts of infringement have caused damage to Neo Wireless. Neo Wireless is entitled to recover from FCA the damages incurred by Neo Wireless as a result of FCA's wrongful acts.

#### **COUNT ONE: INFRINGEMENT OF THE '366 PATENT**

67. Neo Wireless incorporates the allegations of all of the foregoing paragraphs as if fully restated herein.

68. As described above, FCA has infringed and continues to infringe the '366 patent by implementing, using, offering for sale, and selling 4G/LTE and/or 5G/NR cellular functionality

according to one or more 3GPP standard releases from 8 through 17 in the Accused Products, and performing the acts of infringement described above.

69. FCA's Accused Products are configured to operate across the various modes, formats, and schemes defined in the 4G/LTE and 5G/NR 3GPP standards. FCA's Accused Products are configured to operate within 4G/LTE and/or 5G/NR cellular networks that are controlled and configured by various carriers and implemented using a variety of hardware and/or software. Additionally, each base station may operate differently based on the wireless conditions, location, and/or network configuration. Accordingly, FCA's Accused Products are configured to accommodate those differences and implement 3GPP standards holistically, and do not exclude particular modes or schemes in which a serving base station may be configured to operate.

70. Each of FCA's Accused Products implements the portions of the 3GPP LTE standard specification that read on at least claim 1 of the '366 patent. *See* Ex. 7. Exhibit 7 illustrates how implementing and carrying out certain portions of the 3GPP LTE standard ("covered functionality") requires the practicing of at least claim 1 of the '366 patent. *Id.* On information and belief, each portion of the standard cited in Exhibit 7 is implemented to provide LTE functionality in the Accused Products. For example, the covered functionality of the '366 patent is present in the 3GPP LTE standard from the earliest release number 8 through the last LTE release number 17. As further illustrated in Exhibit 7, third-party industry experts, through textbooks and articles, confirm the inclusion of the covered functionality within the 3GPP LTE standard. Further, industry experts consulted by Neo have confirmed that, based on their experience with and knowledge of the 3GPP standards and their implementation, the Accused Products are configured to practice the covered functionality when they provide LTE connectivity. The technology covered by claim 1 of the '366 patent and reflected in the 3GPP standard portions set out in Exhibit 7 is a core part of

communications on an LTE network, and would be required in any device operating on said network. For example, the covered functionality related to the random-access procedure is integral to the establishment of connections between FCA's Accused Products and the serving base stations for LTE networks. Additionally, based on FCC filings and corroborating public information, FCA's Accused Products are compliant with various 3GPP LTE releases, including release 8 and later releases, and are configured with the covered functionalities. Finally, on information and belief, due to the features FCA advertises as enabled by the 4G/LTE functionality, including but not limited to remote connectivity and Wi-Fi internet access, FCA's Accused Products implement the covered functionality of the 3GPP LTE standard regardless of whether one or more aspects of that functionality is mandatory or optional to implement the LTE standard.

71. FCA's Accused Products therefore meet at least one claim of the '366 patent.

72. To the extent that FCA releases any new version of FCA's Accused Products, such instrumentalities will meet the claims of the '366 patent and infringe under 35 U.S.C. § 271(a)–(b) in ways analogous to FCA's current infringement described above.

73. Neo Wireless has been damaged and continues to be damaged by FCA's infringement of the '366 patent.

#### **COUNT TWO: INFRINGEMENT OF THE '908 PATENT**

74. Neo Wireless incorporates the allegations of the foregoing paragraphs as if fully restated herein.

75. As described above, FCA has infringed and continues to infringe the '908 patent by implementing and using 4G/LTE and/or 5G/NR cellular functionality according to one or more 3GPP standard releases from 8 through 17 in the Accused Products, and performing the acts of infringement described above.

76. FCA's Accused Products are configured to operate across the various modes, formats, and schemes defined in the 4G/LTE and 5G/NR 3GPP standards. FCA's Accused Products are configured to operate within 4G/LTE and/or 5G/NR cellular networks that are controlled and configured by various carriers and implemented using a variety of hardware and/or software. Additionally, each base station may operate differently based on the wireless conditions, location, and/or network configuration. Accordingly, FCA's Accused Products are configured to accommodate those differences and implement the 3GPP standards holistically, and do not exclude particular modes or schemes in which a serving base station may be configured to operate. For example, the Accused Products operate within one or more frequency bands, including bands corresponding to more than 6 resource blocks, and thus, transmit a random access signal in only a portion of the frequency band.

77. Each of FCA's Accused Products implements the portions of the 3GPP LTE standard specification that read on at least claim 11 of the '908 patent. *See* Ex. 8. Exhibit 8 illustrates how implementing and carrying out certain portions of the 3GPP LTE standard ("covered functionality") require the practicing of at least claim 11 of the '908 patent. *Id.* On information and belief, each portion of the standard cited in Exhibit 8 is implemented to provide LTE functionality in the Accused Products. For example, the covered functionality of the '908 patent is present in the 3GPP LTE standard from the earliest release number 8 through the last LTE release number 17. As further illustrated in Exhibit 8, third-party industry experts through textbooks and articles confirm the inclusion of the covered functionality within the 3GPP LTE standard. Further, industry experts consulted by Neo have confirmed that, based on their experience with and knowledge of the 3GPP standards and their implementation, the Accused Products are configured to practice the covered functionality when they provide LTE connectivity.



The technology covered by claim 11 of the '908 patent and reflected in the 3GPP standard portions set out in Exhibit 8 is a core part of communications on an LTE network, and would be required in any device operating on said network. For example, the covered functionality related to the random-access procedure is integral to the establishment of connections between FCA's Accused Products and the serving base stations for LTE networks. Additionally, based on FCC filings and corroborating public information, FCA's Accused Products are compliant with various 3GPP LTE releases, including release 8 and later releases, and are configured with the covered functionalities. Finally, on information and belief, due to the features FCA advertises as enabled by the 4G/LTE functionality, including but not limited to remote connectivity and Wi-Fi internet access, FCA's Accused Products implement the covered functionality of the 3GPP LTE standard regardless of whether one or more aspects of that functionality is mandatory or optional to implement the LTE standard.

78. FCA's Accused Products therefore meet at least one claim of the '908 patent.

79. To the extent that FCA releases any new version of FCA's Accused Products, such instrumentalities will meet the claims of the '908 patent and infringe under 35 U.S.C. § 271(a)–(b) in ways analogous to FCA's current infringement described above.

80. Neo Wireless has been damaged and continues to be damaged by FCA's infringement of the '908 patent.

### **COUNT THREE: INFRINGEMENT OF THE '941 PATENT**

81. Neo Wireless incorporates the allegations of the foregoing paragraphs as if fully restated herein.

82. As described above, FCA has infringed and continues to infringe the '941 patent by implementing and using 4G/LTE and/or 5G/NR cellular functionality according to one or more

3GPP standard releases from 8 through 17 in the Accused Products, and performing the acts of infringement described above.

83. FCA's Accused Products are configured to operate across the various modes, formats, and schemes defined in the 4G/LTE and 5G/NR 3GPP standards. FCA's Accused Products are configured to operate within 4G/LTE and/or 5G/NR cellular networks that are controlled and configured by various carriers and implemented using a variety of hardware and/or software. Additionally, each base station may operate differently based on the wireless conditions, location, and/or network configuration. Accordingly, FCA's Accused Products are configured to accommodate those differences and implement the 3GPP standards holistically, and do not exclude particular modes or schemes in which a serving base station may be configured to operate. For example, the Accused Products are configured to receive and process DCI format 2, as well as other DCI formats.

84. Each of FCA's Accused Products implements the portions of the 3GPP LTE standard specification that read on at least claim 13 of the '941 patent. *See* Ex. 9. Exhibit 9 illustrates how implementing and carrying out certain portions of the 3GPP LTE standard ("covered functionality") require the practicing of at least claim 13 of the '941 patent. *Id.* On information and belief, each portion of the standard cited in Exhibit 9 is implemented to provide LTE functionality in the Accused Products. For example, the covered functionality of the '941 patent is present in the 3GPP LTE standard from the earliest release number 8 through the last LTE release number 17. As further illustrated in Exhibit 9, third-party industry experts through textbooks and articles confirm the inclusion of the covered functionality within the 3GPP LTE standard. Further, industry experts consulted by Neo have confirmed that, based on their experience with and knowledge of the 3GPP standards and their implementation, the Accused

Products are configured to practice the covered functionality when they provide LTE connectivity. The technology covered by claim 13 of the '941 patent and reflected in the 3GPP standard portions set out in Exhibit 9 is a core part of communications on an LTE network, and would be required in any device operating on said network. For example, the covered functionality related to the configuring the mobile device for accurate signal reception of subsequent signals based on the characteristics of the serving network components. Additionally, based on FCC filings and corroborating public information, FCA's Accused Products are compliant with various 3GPP LTE releases, including release 8 and later releases, and are configured with the covered functionalities. Finally, on information and belief, due to the features FCA advertises as enabled by the 4G/LTE functionality, including but not limited to remote connectivity and Wi-Fi internet access, FCA's Accused Products implement the covered functionality of the 3GPP LTE standard regardless of whether one or more aspects of that functionality is mandatory or optional to implement the LTE standard.

85. FCA's Accused Products therefore meet at least one claim of the '941 patent.

86. To the extent that FCA releases any new version of FCA's Accused Products, such instrumentalities will meet the claims of the '941 patent and infringe under 35 U.S.C. § 271(a)-(b) in ways analogous to FCA's current infringement described above.

87. Neo Wireless has been damaged and continues to be damaged by FCA's infringement of the '941 patent.

#### **COUNT FOUR: INFRINGEMENT OF THE '450 PATENT**

88. Neo Wireless incorporates the allegations of the foregoing paragraphs as if fully restated herein.

89. As described above, FCA has infringed and continues to infringe the '450 patent by implementing and using 4G/LTE and/or 5G/NR cellular functionality according to one or more 3GPP standard releases from 8 through 17 in the Accused Products, and performing the acts of infringement described above.

90. FCA's Accused Products are configured to operate across the various modes, formats, and schemes defined in the 4G/LTE and 5G/NR 3GPP standards. FCA's Accused Products are configured to operate within 4G/LTE and/or 5G/NR cellular networks that are controlled and configured by various carriers and implemented using a variety of hardware and/or software. Additionally, each base station may operate differently based on the wireless conditions, location, and/or network configuration. Accordingly, FCA's Accused Products are configured to accommodate those differences and implement the 3GPP standards holistically, and do not exclude particular modes or schemes in which a serving base station may be configured to operate. Specifically, the Accused Products are configured to receive and process all the PDCCH formats, including the ones comprising 2, 4, or 8 CCEs.

91. Each of FCA's Accused Products implements the portions of the 3GPP LTE standard specification that read on at least claim 7 of the '450 patent. *See* Ex. 10. Exhibit 10 illustrates how implementing and carrying out certain portions of the 3GPP LTE standard ("covered functionality") require the practicing of at least claim 7 of the '450 patent. *Id.* On information and belief, each portion of the standard cited in Exhibit 10 is implemented to provide LTE functionality in the Accused Products. For example, the covered functionality of the '450 patent is present in the 3GPP LTE standard from the earliest release number 8 through the last LTE release number 17. As further illustrated in Exhibit 10, third-party industry experts, through textbooks and articles, confirm the inclusion of the covered functionality within the 3GPP LTE

standard. Further, industry experts consulted by Neo have confirmed that, based on their experience with and knowledge of the 3GPP standards and their implementation, the Accused Products are configured to practice the covered functionality when they provide LTE connectivity. The technology covered by claim 7 of the '450 patent and reflected in the 3GPP standard portions set out in Exhibit 10 is a core part of communications on an LTE network, and would be required in any device operating on said network. For example, the covered functionality related to the recovery of information over the Physical Downlink Control Channel is central to the operation of the mobile devices within an LTE networks, including allowing the update of information to allow the mobile device to communicate within serving base stations. Additionally, based on FCC filings and corroborating public information, FCA's Accused Products are compliant with various 3GPP LTE releases, including release 8 and later releases, and are configured with the covered functionalities. Finally, on information and belief, due to the features FCA advertises as enabled by the 4G/LTE functionality, including but not limited to remote connectivity and Wi-Fi internet access, FCA's Accused Products implement the covered functionality of the 3GPP LTE standard regardless of whether one or more aspects of that functionality is mandatory or optional to implement the LTE standard.

92. FCA's Accused Products therefore meet at least one claim of the '450 patent.

93. To the extent that FCA releases any new version of FCA's Accused Products, such instrumentalities will meet the claims of the '450 patent and infringe under 35 U.S.C. § 271(a)–(b) in ways analogous to FCA's current infringement described above.

94. Neo Wireless has been damaged and continues to be damaged by FCA's infringement of the '450 patent.

**COUNT FIVE: INFRINGEMENT OF THE '512 PATENT**

95. Neo Wireless incorporates the allegations of all of the foregoing paragraphs as if fully restated herein.

96. As described above, FCA has infringed and continues to infringe the '512 patent by implementing and using 4G/LTE and/or 5G/NR cellular functionality according to one or more 3GPP standard releases from 8 through 17 in the Accused Products, and performing the acts of infringement described above.

97. FCA's Accused Products are configured to operate across the various modes, formats, and schemes defined in the 4G/LTE and 5G/NR 3GPP standards. FCA's Accused Products are configured to operate within 4G/LTE and/or 5G/NR cellular networks that are controlled and configured by various carriers and implemented using a variety of hardware and/or software. Additionally, each base station may operate differently based on the wireless conditions, location, and/or network configuration. Accordingly, FCA's Accused Products are configured to accommodate those differences and implement the 3GPP standards holistically, and do not exclude particular modes or schemes in which a serving base station may be configured to operate. For example, the Accused Products are configured to operate in cells supporting non-MBSFN transmission, and are configured to receive downlink data that is transmitted in a variety of transmission modes, including at least transmission mode 7 using UE-specific reference signals.

98. Each of FCA's Accused Products implements the portions of the 3GPP LTE standard specification that read on at least claim 15 of the '512 patent. *See* Ex. 11. Exhibit 11 illustrates how implementing and carrying out certain portions of the 3GPP LTE standard ("covered functionality") require the practicing of at least claim 15 of the '512 patent. *Id.* On information and belief, each portion of the standard cited in Exhibit 11 is implemented to provide

LTE functionality in the Accused Products. For example, the covered functionality of the '512 patent is present in the 3GPP LTE standard from the earliest release number 8 through the last LTE release number 17. As further illustrated in Exhibit 11, third-party industry experts, through textbooks and articles, confirm the inclusion of the covered functionality within the 3GPP LTE standard. Further, industry experts consulted by Neo have confirmed that, based on their experience with and knowledge of the 3GPP standards and their implementation, the Accused Products are configured to practice the covered functionality when they provide LTE connectivity. The technology covered by claim 15 of the '512 patent and reflected in the 3GPP standard portions set out in Exhibit 11 is a core part of communications on an LTE network, and would be required in any device operating on said network. For example, the covered functionality related to the reference signaling is important to maintain accurate signaling between the mobile device and the serving cells in the LTE network, particularly for mobile devices, such as those implemented in FCA's Accused Products that are highly mobile and often move through multiple serving cells. Additionally, based on FCC filings and corroborating public information, FCA's Accused Products are compliant with various 3GPP LTE releases, including release 8 and later releases, and are configured with the covered functionalities. Finally, on information and belief, due to the features FCA advertises as enabled by the 4G/LTE functionality, including but not limited to remote connectivity and Wi-Fi internet access, FCA's Accused Products implement the covered functionality of the 3GPP LTE standard regardless of whether one or more aspects of that functionality is mandatory or optional to implement the LTE standard.

99. FCA's Accused Products therefore meet at least one claim of the '512 patent.

100. To the extent that FCA releases any new version of FCA's Accused Products, such instrumentalities will meet the claims of the '512 patent and infringe under 35 U.S.C. § 271(a)–(b) in ways analogous to FCA's current infringement described above.

101. Neo Wireless has been damaged and continues to be damaged by FCA's infringement of the '512 patent.

**COUNT SIX: INFRINGEMENT OF THE '302 PATENT**

102. Neo Wireless incorporates the allegations of all of the foregoing paragraphs as if fully restated herein.

103. As described above, FCA has infringed and continues to infringe the '302 patent by implementing and using 4G/LTE and/or 5G/NR cellular functionality according to one or more 3GPP standard releases from 8 through 17 in the Accused Products, and performing the acts of infringement described above.

104. FCA's Accused Products are configured to operate across the various modes, formats, and schemes defined in the 4G/LTE and 5G/NR 3GPP standards. FCA's Accused Products are configured to operate within 4G/LTE and/or 5G/NR cellular networks that are controlled and configured by various carriers and implemented using a variety of hardware and/or software. Additionally, each base station may operate differently based on the wireless conditions, location, and/or network configuration. Accordingly, FCA's Accused Products are configured to accommodate those differences and implement the 3GPP standards holistically, and do not exclude particular modes or schemes in which a serving base station may be configured to operate. For example, the Accused Products are configured to support simultaneous transmission of SRS and PUCCH, e.g., by transmitting the SRS over a time period that overlaps with the transmission period of one or more PUCCH signals transmitted by other mobile devices.



105. Each of FCA's Accused Products implements the portions of the 3GPP LTE standard specification that read on at least claim 23 of the '302 patent. *See* Ex. 12. Exhibit 12 illustrates how implementing and carrying out certain portions of the 3GPP LTE standard ("covered functionality") require the practicing of at least claim 23 of the '302 patent. *Id.* On information and belief, each portion of the standard cited in Exhibit 12 is implemented to provide LTE functionality in the Accused Products. For example, the covered functionality of the '302 patent is present in the 3GPP LTE standard from the earliest release number 8 through the last LTE release number 17. As further illustrated in Exhibit 12, third-party industry experts, through textbooks and articles, confirm the inclusion of the covered functionality within the 3GPP LTE standard. Further, industry experts consulted by Neo have confirmed that, based on their experience with and knowledge of the 3GPP standards and their implementation, the Accused Products are configured to practice the covered functionality when they provide LTE connectivity. The technology covered by claim 23 of the '302 patent and reflected in the 3GPP standard portions set out in Exhibit 12 is a core part of communications on an LTE network, and would be required in any device operating on said network. For example, the covered functionality related to reference signaling allows for accurate channel measurement and allocation of bandwidth resources, which is particularly important for highly mobile devices, such as those implemented in FCA's Accused Products, whose channel conditions and other wireless conditions may change frequently. Additionally, based on FCC filings and corroborating public information, FCA's Accused Products are compliant with various 3GPP LTE releases, including release 8 and later releases, and are configured with the covered functionalities. Finally, on information and belief, due to the features FCA advertises as enabled by the 4G/LTE functionality, including but not limited to remote connectivity and Wi-Fi internet access, FCA's Accused Products implement the

covered functionality of the 3GPP LTE standard regardless of whether one or more aspects of that functionality is mandatory or optional to implement the LTE standard.

106. FCA's Accused Products therefore meet at least one claim of the '302 patent.

107. To the extent that FCA releases any new version of FCA's Accused Products, such instrumentalities will meet the claims of the '302 patent and infringe under 35 U.S.C. § 271(a)–(b) in ways analogous to FCA's current infringement described above.

108. Neo Wireless has been damaged and continues to be damaged by FCA's infringement of the '302 patent.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests the following relief:

- a. a judgment in favor of Plaintiff that FCA has infringed, either literally and/or under the doctrine of equivalents, the Asserted Patents;
- b. a judgment that FCA's infringement has been and is willful;
- c. a judgment and order requiring FCA to pay Plaintiff its damages, costs, expenses, and any enhanced damages to which Plaintiff is entitled for FCA's infringement;
- d. a judgment and order requiring FCA to provide an accounting and to pay supplemental damages to Plaintiff, including without limitation, pre-judgment and post-judgment interest;
- e. a judgment and order requiring FCA to pay ongoing royalties;
- f. a judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding Plaintiff its reasonable attorney fees against FCA; and
- g. any and all other relief as the Court may deem appropriate and just under the

circumstances.

**DEMAND FOR JURY TRIAL**

Pursuant to Fed. R. Civ. P. 38, Plaintiff hereby demands trial by jury on all claims and issues so triable.

DATED: July 15, 2022

Respectfully submitted,

SAND, SEBOLT & WERNOW CO., LPA

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